Bibliography of Research Applications Using VA National *Outpatient Databases*

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Introduction

This bibliography of research applications using VA national outpatient data lists published reports that researchers may reference in their own research.

A PubMed (http://www.ncbi.nih.gov/entrez/query.fcgi) search was conducted on 11/22/02, with 302 references resulting from using the parameters of:

(veteran OR veterans)
AND (data OR database OR databases)
AND (outpatient OR outpatients OR OPC)

Each abstract was read, and a qualitative judgment was made concerning relevance to the Medical SAS Datasets using the following criteria:

> Does the abstract refer to "outpatient" or "administrative" data?
> Does the abstract refer to "Austin Automation Center" or "AAC" data?

If the answer to both questions was yes, the article was classified as relevant to research applications using national VA data. This yielded a total of 61 articles.

The 61 articles are sorted by year and alphabetized within each year.

The list is organized by:
-Year of publication
-Author(s)
-*Title*
-Medline Journal Abbreviation
-Publisher
-Abstract
-Link to PubMed entry with abstract ID, MeSH terms, and related articles

Bibliography of Research Applications Using VA National Outpatient Databases

Year 2002

Barnett PG, Chen S, Boden WE, Chow B, Every NR, Lavori PW et al.
Cost-effectiveness of a conservative, ischemia-guided management strategy after non-Q-wave myocardial infarction: results of a randomized trial.
Circulation 2002; 105(6):680-684.

Abstract: BACKGROUND: Use of coronary angiography after myocardial infarction has been controversial, with some physicians advocating routine use and others advocating selective use only after documentation of residual myocardial ischemia. The effects of these strategies on economic outcomes have not been established. METHODS AND RESULTS: We analyzed data from a randomized, controlled clinical trial conducted in 17 Department of Veterans Affairs hospitals that enrolled 876 clinically uncomplicated patients 24 to 72 hours after an acute non-Q-wave myocardial infarction. The routine invasive strategy included early coronary angiography with revascularization based on established guidelines. The conservative, ischemia-guided strategy included noninvasive testing with radionuclide ventriculography and exercise thallium scintigraphy, followed by coronary angiography in patients with objective evidence of myocardial ischemia. We measured the cost of hospitalization and outpatient visits and tests during follow-up and calculated the incremental cost-effectiveness ratio. The conservative, ischemia-guided strategy had lower costs than the routine invasive strategy, both during the initial hospitalization ($14 733 versus $19 256, P<0.001) and after a mean follow-up of 1.9 years ($39 707 versus $41 893, P=0.04). The hazard ratio for death was 0.72 (confidence limits, 0.51 to 1.01) in the conservative strategy. The conservative strategy had lower costs and better outcomes in 76% of 1000 bootstrap replications, and a cost-effectiveness ratio below $50 000 per year of life added in 96% of replications. CONCLUSIONS: A conservative, ischemia-guided strategy of selective coronary angiography and revascularization for patients who develop objective evidence of recurrent ischemia is more cost-effective than a strategy of routine coronary angiography after uncomplicated non-Q-wave myocardial infarction
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11839621&dopt=r

Desai MM, Rosenheck RA, Druss BG, Perlin JB.
Receipt of nutrition and exercise counseling among medical outpatients with psychiatric and substance use disorders.
J Gen Intern Med 2002; 17(7):556-560.

Abstract: OBJECTIVE: Mentally ill persons represent a population that is potentially vulnerable to receiving a poorer quality of medical care. This study examines the relationship between mental disorders and the likelihood of receiving recommended nutrition and exercise counseling. DESIGN: Cross-sectional study combining chart-review data and administrative database records. SETTING: One hundred forty-seven Veterans Affairs (VA) medical centers nationwide. PATIENTS/PARTICIPANTS: The sample included 90,240 patients with obesity and/or hypertension who had >/=3 medical outpatient visits in the previous year. MEASUREMENTS AND MAIN RESULTS: The outcomes of interest were chart-documented receipt of nutrition counseling and receipt of exercise counseling in the past 2 years. This chart information was merged with VA inpatient and outpatient administrative databases, which were used to identify persons with diagnosed mental disorders. Most patients received nutrition counseling (90.4%), exercise counseling (88.5%), and counseling for both (85.7%) in the past 2 years. The rates of counseling differed significantly but modestly by mental health status. The lowest rates were found among patients dually diagnosed with comorbid psychiatric and substance use disorders; however, the magnitude of the disparities was small, ranging from 2% to 4% across outcomes. These results were unchanged after controlling for demographics, health status, and facility characteristics using multivariable generalized estimating equation modeling. CONCLUSIONS: Among patients engaged in active medical treatment, rates of nutrition and exercise counseling were high at VA medical centers, and the diagnosis of mental illness was not a substantial barrier to such counseling. More work is needed to determine whether these findings generalize to non-VA settings and to understand the potential role that integrated systems such as the VA can play in reducing disparities for vulnerable populations
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=12133146&dopt=r

Desai MM, Rosenheck RA, Druss BG, Perlin JB.

Mental disorders and quality of diabetes care in the veterans health administration.
Am J Psychiatry 2002; 159(9):1584-1590.

Abstract: OBJECTIVE: The population of persons with mental disorders is potentially vulnerable to poor quality of medical care. This study examined the relationship between mental disorders and quality of diabetes care in a national sample of veterans. METHOD: Chart-abstracted quality data were merged with outpatient and inpatient administrative database records for a sample of veterans with diabetes who had at least three outpatient visits in the previous year (N=38,020). Mental health diagnoses were identified by use of the administrative data. Quality of diabetes care was assessed with five indicators by chart documentation: annual foot inspection, pedal pulses examination, foot sensory examination, retina examination, and glycated hemoglobin determination. RESULTS: Approximately a quarter of the sample had a diagnosed mental disorder (23.7% with psychiatric disorder only, 1.3% with substance use disorder only, and 2.6% with a dual diagnosis). Overall rates of receipt for the indicators were higher than national benchmarks for all patient subgroups, ranging from 70.8% for retina examination to 95.0% for foot inspection. Rates for both retina examination and foot sensory examination differed significantly by mental health status, mainly because of lower rates among those with a substance use disorder. The associations remained significant in multivariate generalized estimating equation analyses that controlled for demographic characteristics, health status, use of medical services, and hospital-level characteristics. CONCLUSIONS: Rates for secondary prevention of diabetes were remarkably high at Department of Veterans Affairs medical centers, although patients with mental disorders (particularly substance use disorders) were somewhat less likely to receive some of the recommended interventions
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=12202281&dopt=r

Forneris CA, Bosworth HB, Butterfield MI.
Outpatient care use among female veterans: differences between mental health and non-mental health users.
Mil Med 2002; 167(1):10-13.

Abstract: We examined the influence of mental health service use on outpatient health service use among female veterans. We conducted a retrospective and correlational study of treatment-seeking women and their pattern of health service use and the relationship between mental health and somatoform symptoms and service use. Data were obtained from a self-report measure designed to screen for mental and somatoform symptoms and from a federally maintained database of all outpatient contacts. Women who used mental health services were more likely to have a greater number of non-mental health visits than women who did not. The most commonly endorsed somatoform symptoms were feeling tired or having low energy and pain in extremities and joints. These symptoms were correlated with non-mental health service use, as were back pain, menstrual pain or problems, and trouble sleeping. We conclude that a history of somatoform symptoms might increase rates of health service use despite treatment for mental problems
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11799806&dopt=r

Hedeen AN, Heagerty PJ, Fortney JC, Borowsky SJ, Walder DJ, Chapko MK.
VA community-based outpatient clinics: quality of care performance measures.
Med Care 2002; 40(7):570-577.

Abstract: BACKGROUND: The Veterans Health Administration (VHA) recently initiated a system of Community-Based Outpatient Clinics (CBOCs) to enhance delivery of primary care to veterans. OBJECTIVE: The objective of this study was to compare quality of care provided to veterans at CBOCs and at traditional hospital-based VA Medical Center (VAMC) clinics. RESEARCH DESIGN: Quality of care was assessed using medical record data abstracted at CBOCs and VAMCs. The analysis used a logistic regression model that allowed for possible within-facility correlation and controlled for patient differences between facilities. SUBJECTS: The study included 4768 patients from 20 geographically diverse CBOCs and 2433 patients from the 20 VAMCs associated with these CBOCs. MEASURES: Quality of care was measured using 7 Prevention Index (PI) indicators and 9 Chronic Disease Care Index (CDCI) indicators, which assess compliance with nationally recognized guidelines for primary prevention, early disease detection, and care of patients with chronic disease. RESULTS: In the overall CBOC versus VAMC comparisons, performance was not significantly different on 15 of the 16 PI and CDCI indicators. In the comparisons between individual CBOCs and VAMCs pairs, 5 out of 20 CBOCs performed significantly below the affiliated VAMC on 4 or more indicators. CONCLUSIONS: These results suggest that CBOCs overall are providing a similar level of quality of care as VAMCs based on the PI and CDCI, although performance at several individual CBOCs fell below their

affiliated VAMC on some indicators. Therefore, it appears that CBOCs are a valid approach for providing quality primary care to veterans
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=12142772&dopt=r

Lee ML, Yano EM, Wang M, Simon BF, Rubenstein LV.
What patient population does visit-based sampling in primary care settings represent?
Med Care 2002; 40(9):761-770.

Abstract: BACKGROUND: Evaluations of outpatient interventions often rely on consecutive sampling of clinic visitors, and assume that study results generalize to the population of patients cared for. OBJECTIVE: The representativeness of such visit-based sampling compared with the population of patients seen during the same year, in terms of sociodemographic and clinical characteristics of the user groups that visit-based sampling yielded were assessed. METHODS: One thousand five hundred forty-six continuing patients visiting the primary care firms in an urban VA medical center were consecutively sampled, and visit frequencies were compared for these patients with subsets of the patient population. Administrative and survey data was then used to describe the types of patients visit-based sampling most represented compared with the types of patients sampled less frequently. RESULTS: The average sampled patient visited the firms significantly more often than patients in the reference population (18.7 vs. 9.5). Sampled patients were significantly older (>55 years), in poorer health (higher prevalence of cancer, stroke, hypertension), less likely to smoke, and more likely to be single than the average patient visiting the firms ($P<0.05$). Adjusting for age and sickness, frequent visitors were more apt to have experienced continuity of care during the prior year, to prefer VA care, and to be unemployed. CONCLUSIONS: Consecutive visit-based sampling actually selected patients with a visit pattern more typical of the patient population visiting four or more times a year. Studies using sampling of consecutive visitors will typically under-represent low users of care and should account for the degree to which results may not generalize to the broader practice population
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=12218767&dopt=r

Murphy PA, Cowper DC, Seppala G, Stroupe KT, Hynes DM.
Veterans Health Administration inpatient and outpatient care data: an overview.
Eff Clin Pract 2002; 5(3 Suppl):E4.

No abstract available
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=12166925&dopt=r

Rosen AK, Loveland SA, Anderson JJ, Hankin CS, Breckenridge JN, Berlowitz DR.
Diagnostic cost groups (DCGs) and concurrent utilization among patients with substance abuse disorders.
Health Serv Res 2002; 37(4):1079-1103.

Abstract: OBJECTIVE: To assess the performance of Diagnostic Cost Groups (DCGs) in explaining variation in concurrent utilization for a defined subgroup, patients with substance abuse (SA) disorders, within the Department of Veterans Affairs (VA). DATA SOURCES: A 60 percent random sample of veterans who used health care services during Fiscal Year (FY) 1997 was obtained from VA administrative databases. Patients with SA disorders (13.3 percent) were identified from primary and secondary ICD-9-CM diagnosis codes. STUDY DESIGN: Concurrent risk adjustment models were fitted and tested using the DCG/HCC model. Three outcome measures were defined: (1) "service days" (the sum of a patient's inpatient and outpatient visit days), (2) mental health/substance abuse (MH/SA) service days, and (3) ambulatory provider encounters. To improve model performance, we ran three DCG/HCC models with additional indicators for patients with SA disorders. DATA COLLECTION: To create a single file of veterans who used health care services in FY 1997, we merged records from all VA inpatient and outpatient files. PRINCIPAL FINDINGS: Adding indicators for patients with mild/moderate SA disorders did not appreciably improve the R-squares for any of the outcome measures. When indicators were added for patients with severe SA who were in the most costly category, the explanatory ability of the models was modestly improved for all three outcomes. CONCLUSIONS: Modifying the DCG/HCC model with additional markers for SA modestly improved homogeneity and model prediction. Because considerable variation still remained after modeling, we conclude that health care systems should evaluate "off-the-shelf" risk adjustment systems before applying them to their own populations

http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=12236385&dopt=r

Sernyak MJ, Leslie DL, Alarcon RD, Losonczy MF, Rosenheck R.
Association of diabetes mellitus with use of atypical neuroleptics in the treatment of schizophrenia.
Am J Psychiatry 2002; 159(4):561-566.

Abstract: OBJECTIVE: The development of both type I and type II diabetes after initiation of some atypical neuroleptics has been reported, primarily in studies involving small series of patients. This study used administrative data from a large national sample of patients with a diagnosis of schizophrenia to compare the prevalence of diabetes mellitus in patients receiving prescriptions for atypical and typical neuroleptics. METHOD: All outpatients with schizophrenia treated with typical and atypical neuroleptics over 4 months in 1999 in the Veterans Health Administration of the Department of Veterans Affairs (VA) were included in this study. Patients treated with atypical neuroleptics were those who received prescriptions for clozapine, olanzapine, risperidone, or quetiapine. Patients with a diagnosis of diabetes were also identified by using ICD-9 codes in VA administrative databases. The prevalence of diabetes mellitus across age groups and among patients receiving prescriptions for different atypical neuroleptics was examined with multiple logistic regression. RESULTS: A total of 38,632 patients were included in the study: 15,984 (41.4%) received typical neuroleptics and 22,648 (58.6%) received any atypical neuroleptic (1,207 [5.3%] received clozapine; 10,970 [48.4%], olanzapine; 955 [4.2%], quetiapine; and 9,903 [43.7%], risperidone; 387 patients received prescriptions for more than one atypical neuroleptic). When the effects of age were controlled, patients who received atypical neuroleptics were 9% more likely to have diabetes than those who received typical neuroleptics, and the prevalence of diabetes was significantly increased for patients who received clozapine, olanzapine, and quetiapine, but not risperidone. However, for patients less than 40 years old, all of the atypical neuroleptics were associated with a significantly increased prevalence of diabetes. CONCLUSIONS: In this large group of patients with schizophrenia, receipt of a prescription for atypical neuroleptics was significantly associated with diabetes mellitus
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11925293&dopt=r

Subramanian U, Weinberger M, Eckert GJ, L'Italien GJ, Lapuerta P, Tierney W.
Geographic variation in health care utilization and outcomes in veterans with acute myocardial infarction.
J Gen Intern Med 2002; 17(8):604-611.

Abstract: OBJECTIVES: To examine regional variation in health care utilization and outcomes during acute and chronic care of veterans following acute myocardial infarction (AMI), identifying potentially modifiable variables and processes of care that influence patient outcomes. METHODS: Using national VA databases, we identified all veterans hospitalized at any VA Medical Center (VAMC) for AMI between October 1990 and September 1997. Demographic, inpatient, outpatient, mortality, and readmission data were extracted for 4 regions: Northeast, South, Midwest and West. Multivariable Cox proportional hazards regression models, controlled for comorbidity, were used to assess predictors of time to death and readmission. RESULTS: We identified 67,889 patients with AMI. Patient demographic characteristics by region were similar. Patients in the Northeast had more comorbid conditions and longer lengths of stay during the index AMI hospitalization. Region of the country independently predicted time to death, with lower risk of death in the Northeast (hazard ratio [HR] = 0.875; 95% confidence interval [95% CI], 0.834 to 0.918; P < .0001) and West (HR = 0.856; 95%CI, 0.818 to 0.895; P = .0001) than in the South. Patients in the Northeast and West also had more cardiology or primary care follow-up within 60 days and at 1 year post-discharge than patients in the South and Midwest. Outpatient follow-up accounted for a significant portion of the variation in all-cause mortality. CONCLUSION: Substantial geographic variation exists in subsequent clinical care and outcomes among veterans hospitalized in VAMCs for AMIs. Outpatient follow-up was highly variable and associated with decreased mortality. Further studies are needed to explore the causes of regional variation in processes of care and to determine the most effective strategies for improving outcomes after AMI
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=12213141&dopt=r

Szeto HC, Coleman RK, Gholami P, Hoffman BB, Goldstein MK.
Accuracy of computerized outpatient diagnoses in a Veterans Affairs general medicine clinic.

Am J Manag Care 2002; 8(1):37-43.

Abstract: BACKGROUND: Electronically available data, both administrative, such as outpatient encounter diagnostic data, and clinical, such as problem lists, are being used increasingly for outcome and quality assessment, risk adjustment, and clinical reminder systems. OBJECTIVE: To determine the accuracy of outpatient primary care diagnostic information recorded in administrative and clinical files in a Veterans Affairs VISTA (Veterans Health Information Systems and Technology Architecture) database compared with medical chart notes. STUDY DESIGN: Cross-sectional medical chart review of 148 patients attending a general medicine clinic at a university-affiliated Veterans Affairs hospital for 9 diagnoses relevant to the choice of drug therapy for hypertension. PATIENTS AND METHODS: An administrative file of encounter diagnoses, for a 2-year period, and a clinical file of the problem list maintained by the clinician were the sources of electronic diagnoses. We compared these sources with diagnoses abstracted by medical chart review. We estimated the sensitivity and specificity of each electronic data source for detecting medical chart note diagnoses. RESULTS: The sensitivity for 8 of the 9 study diagnoses was greater than 80% in the administrative file and 49% in the clinical problem list. The specificity was good for the administrative file (91% to 100%) and even better for the clinical file (98% to 100%). CONCLUSIONS: Outpatient encounter diagnoses relevant to hypertension recorded as electronic data had high specificity, and some codes had high sensitivity when collected over multiple visits. The administrative file was more sensitive but less specific than the clinical file. Administrative vs clinical files can be selected to minimize either the false-negative or the false-positive designations, respectively, as dictated by the needs of the quality assessment review
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11814171&dopt=r

Valenstein M, Copeland LA, Blow FC, McCarthy JF, Zeber JE, Gillon L et al.
Pharmacy data identify poorly adherent patients with schizophrenia at increased risk for admission.
Med Care 2002; 40(8):630-639.

Abstract: BACKGROUND: Health care organizations may be able to use pharmacy data to identify patients with schizophrenia and poor antipsychotic adherence. OBJECTIVE: To determine whether a pharmacy-based measure of outpatient adherence, the medication possession ratio (MPR), is associated with adverse outcomes among patients with schizophrenia, as evidenced by increased psychiatric admission. RESEARCH DESIGN: Cohort study linking pharmacy and utilization data for veterans with schizophrenia. MPRs were calculated by dividing the number of days' supply of antipsychotic medication the veteran had received by the number of days' supply they needed to receive to take their antipsychotic continuously. Using multivariate regression, the relationship between MPRs and psychiatric admission was examined. SUBJECTS: Sixty-seven thousand seventy-nine veterans who received a diagnosis of schizophrenia and had outpatient antipsychotic medication fills between October 1, 1998 and September 30, 1999. RESULTS: Patients with MPRs close to 1.0 had the lowest rates of admission. As patients secured progressively smaller proportions of required antipsychotic medication (and had smaller MPRs), rates of admission climbed. Among patients on one antipsychotic (n = 49,003), patients with poor adherence (MPRs < 0.8) were 2.4 times as likely to be admitted as patients with good adherence (MPRs from 0.8-1.1). 23% of poorly adherent patients but only 10% of adherent patients were admitted. Once admitted, poorly adherent patients had more hospital days. Patients who received excess medication also had higher admission rates. CONCLUSIONS: Many health care systems may be able to use pharmacy data to identify poorly adherent patients with schizophrenia. These patients are at-risk for admission and may benefit from intervention
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=12187177&dopt=r

Wannemacher AJ, Schepers GP, Townsend KA.
Antihypertensive medication compliance in a veterans affairs healthcare system.
Ann Pharmacother 2002; 36(6):986-991.

Abstract: OBJECTIVE: To compare compliance rates associated with categories of antihypertensive medications in a Veteran's Affairs (VA) Healthcare System by use of readily available data and standard software. METHODS: Prescriptions from the Veteran's Health Information System Technology Architecture (VISTA) database for angiotension-converting enzyme (ACE) inhibitors, angiotensin II receptor blockers (ARBs), beta-blockers, calcium-channel blockers (CCBs), diuretics, and a miscellaneous group of antihypertensives filled or refilled during a 12-month period were included in the analysis. Claims data for each prescription were exported from the VISTA database to

Microsoft Excel, and compliance rates were calculated by use of a methodology reported elsewhere. Mean compliance rates for each antihypertensive category were compared. RESULTS: A total of 26 201 prescription records accounting for 51 927 separate prescription fills or refills were included. The majority of prescriptions (77%) were associated with calculated compliance rates >80%. The CCB category was associated with a significantly higher compliance rate ($p < 0.001$) than the beta-blockers (95% CI 1.3% to 3.7%), diuretics (95% CI 1.4% to 3.8%), and miscellaneous agents (95% CI 1.7% to 7.5%). The ACE inhibitor category was associated with a significantly higher rate ($p < 0.001$) than the beta-blockers (95% CI 0.7% to 3.0%), diuretics (95% CI 0.7% to 3.0%), and miscellaneous agents (95% CI 1.1% to 6.8%). The ARB category had a higher compliance rate ($p < 0.001$) than the miscellaneous category (95% CI 1.2% to 11.9%). There were no significant differences in compliance rates among ACE inhibitors, CCBs, or ARBs. CONCLUSIONS: VA outpatients are relatively compliant when taking their antihypertensive medications as measured by prescription refill rates. Compliance rates for CCBs and ACE inhibitors are higher than those for beta-blockers, diuretics, and agents such as clonidine, methyldopa, hydralazine, and reserpine. Compliance for ARBs compared favorably with those of CCBs and ACE inhibitors. The methods used in this evaluation can be easily implemented at other institutions as part of ongoing medication compliance improvement efforts
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=12022897&dopt=r

Year 2001

Andrus CH, Johnson K, Pierce E, Romito PJ, Hartel P, Berrios-Guccione S et al.
Finance modeling in the delivery of medical care in tertiary-care hospitals in the Department of Veterans Affairs.
J Surg Res 2001; 96(2):152-157.

Abstract: BACKGROUND: In the mid-1990s, the Department of Veterans Affairs (DVA) implemented the Veterans Equitable Resource Allocation (VERA), a new financial model developed to attempt to better distribute the approximately $18 billion annual budget among roughly 170 Veterans Administration Medical Centers (VAMCs). VERA is based on a Health Maintenance Organization (HMO) model. VERA provides reimbursement to each of the 22 regional Veterans Integrated Service Networks (VISNs), and subsequent VISN distribution to individual VAMCs is based on an individual medical center's enrollment of unique social security numbers (uniques). In HMO vocabulary these are individual "covered lives." METHODS: Currently available demographic and staffing information regarding the DVA's 23 tertiary hospital systems (Category 7 hospitals) on the KLF database (DVA Austin Data Base) and published information on the DVA website were reviewed. The following was obtained: (1) staffing information-physician and nurse full-time employment equivalent (FTEE) staffing; (2) patient demographics and hospital workload-facility uniques (u), outpatient facility uniques, average daily census (ADC), discharges, and outpatient clinic visits. The following staffing ratios were calculated for both physician and nursing: FTEE/(u/1000), FTEE/(discharges/1000), FTEE/(clinic visits/1000), FTEE/ADC. For all categories the means +/- SD were calculated and correlation coefficients were calculated on pertinent pairings. RESULTS: Although categorized as similar tertiary care facilities, the 23 "Group 7" VA hospitals are anything but equivalent when reviewed using the VERA financing model with respect to physician staffing, nurse staffing, and facility uniques. Using VERA methodology, average physician FTEE and total nursing FTEE staffing/(u/1000) are 3.67 +/- 0.89 and 15.53 +/- 3.77, respectively. Correlation statistics of staffing versus unique SSNs demonstrated correlation coefficients of 0.46 and 0.59 with respect to physician and nurse staffing, respectively. On the other hand, when physician FTEE and nursing FTEE staffing were compared with VAMC workload parameters (total ADC, discharges, and outpatient visits), correlation coefficients were more consistent, ranging from 0.62 to 0.86. CONCLUSIONS: In the VERA model, the reward of a larger annual budget for an individual VAMC or the regional VISN is realized when staffing of VAMCs is minimized, overall provided medical services (especially costly tertiary services) are limited, and the number of covered lives is maximized. A VAMC staffing system that equates medical services delivered in a tertiary VAMC setting based on an HMO model like VERA (where the user population is skewed toward the sicker, older patient) shows decreased correlation when compared with VAMC workload model parameters
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11266266&dopt=r

Bauer MS, Kirk GF, Gavin C, Williford WO.
Determinants of functional outcome and healthcare costs in bipolar disorder: a high-intensity follow-up study.

J Affect Disord 2001; 65(3):231-241.

Abstract: BACKGROUND: Review of published studies reveals few data regarding determinants of the poor functional outcome and high healthcare costs that are characteristic of bipolar disorder. In order to identify potential mechanisms, critical to designing optimal treatment strategies, this longitudinal study investigated (a) the degree to which disease outcome is correlated with functional outcome and direct treatment costs, and (b) whether similar demographic or clinical characteristics predict disease and functional outcome and healthcare costs. METHODS: Disease and functional outcome were assessed in bimonthly structured interviews over 48 weeks in 43 outpatient veterans with bipolar disorder. Direct mental health treatment costs from the VA perspective were determined from the VA database and patient interview. Regression analysis was used to determine association among the three outcome domains, and to identify clinical or demographic variables that predicted each of the three domains. RESULTS: Functional outcome was correlated with depressive, but not manic, symptoms during follow-up. Costs were not correlated with any measure of disease or functional outcome. Several demographic, but not clinical, characteristics predicted functional outcome. In contrast, several clinical, but not demographic, characteristics predicted symptom status. No predictors were associated with direct treatment costs. LIMITATIONS: Subjects were predominantly male veterans of relatively homogeneous social class, followed prospectively for approximately one year in a clinic designed specifically to minimize barriers to care. CONCLUSIONS: Data from this and prior studies indicate that ongoing depressive symptoms are strongly associated with functional outcome, although substantial variance remains unexplained. Optimal models to explain functional outcome and healthcare costs will need to address factors besides simply disease severity and chronicity. The authors present a heuristic paradigm for understanding both the research and therapeutic aspects of these findings
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11511403&dopt=r

Billingsley KG, Maynard C, Schwartz DL, Dominitz JA.
The use of trimodality therapy for the treatment of operable esophageal carcinoma in the veteran population: patient survival and outcome analysis.
Cancer 2001; 92(5):1272-1280.

Abstract: BACKGROUND: In an effort to improve the cure rates associated with surgical therapy, neoadjuvant chemoradiotherapy is being used with increasing frequency before resection (trimodality therapy). A variety of clinical trials have reviewed this approach, but only one study to the authors' knowledge has shown a survival benefit for trimodality therapy. The extent to which trimodality therapy has gained acceptance in general practice is not clear. The objective of the current study was to determine the extent to which both surgery and trimodality therapy are used for the management of esophageal carcinoma within a large, national health care system and to determine the outcome of patients treated with these treatment approaches. METHODS: The current study was a retrospective cohort study. The study population was comprised of all veterans who underwent either surgery alone or trimodality therapy for operable esophageal carcinoma between the fiscal years of 1993 and 1997. Data were obtained from the Veterans Administration Patient Treatment File, Outpatient Clinic File, and the Beneficiary Identification Record Locator System. The main outcome measures were perioperative mortality and patient survival. RESULTS: During the study period, 695 patients underwent either surgery alone or trimodality therapy for esophageal carcinoma. Five hundred thirty-four (77%) patients were treated with surgery only. One hundred sixty-one (23%) patients underwent surgery after induction chemoradiotherapy (trimodality therapy). Patients selected for trimodality therapy were younger (mean age, 60.8 years vs. 65.6 years), had fewer comorbidities, and were more likely to have a midesophageal tumor. The median survival for all patients was 15.2 months. The type of treatment had no apparent effect on survival. Favorable prognostic factors included younger age, a distal esophageal tumor, and the absence of metastases. The overall perioperative mortality was 13.7 %. The use of trimodality therapy did not increase perioperative mortality. CONCLUSIONS: Trimodality therapy is commonly used within the VA system. The nonrandomized nature of this study does not allow comparison of trimodality therapy to surgery alone, but the overall survival was limited for all patients. The predictors of survival are related to the biology of the disease, and they include patient age, tumor location, and stage at diagnosis
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11571743&dopt=r

Chen RS, Rosenheck R.

Using a computerized patient database to evaluate guideline adherence and measure patterns of care for major depression.
J Behav Health Serv Res 2001; 28(4):466-474.

Abstract: This study examined the translation of recommendations from the Agency for Health Care Policy and Research (AHCPR) guidelines for major depression into measures derived from a computerized database to assess guideline conformance and patterns of care for major depression. Patients (n = 208) were identified who were hospitalized for major depression and had two or more outpatient mental health appointments within 6 months of discharge from an academically affiliated Veterans Affairs Medical Center. Measures were based on AHCPR guideline recommendations or developed independently. Conformance could be measured for three guideline recommendations. Of patients on single-agent antidepressant therapy, 87% received dosages within the recommended range. Sixty-nine percent received the recommended number of follow-up visits. Specific condition-related treatment interventions were identified in 32% of patients with concurrent alcoholism. Dual diagnoses of depression and drug or alcohol abuse were not deterrents to prescribing benzodiazepines. Despite its limitations, computerized database analyses provided efficient measures of guideline adherence
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11732248&dopt=r

Dominitz JA, Maynard C, Boyko EJ.
Assessment of vital status in Department of Veterans Affairs national databases. comparison with state death certificates.
Ann Epidemiol 2001; 11(5):286-291.

Abstract: PURPOSE: To determine the extent to which Department of Veterans Affairs (VA) database vital status information agrees with Washington state death certificates. METHODS: Using each data source, vital status was determined for 19,481 Washington state resident veterans hospitalized in Washington VA hospitals from 1994 to 1997, and for 33,602 Washington state resident veterans who were seen as outpatients during 1997. RESULTS: The agreement between VA and Washington state records was excellent for hospitalized veterans (kappa = 0.91, $p < 0.0001$). Three thousand one hundred-eight individuals (86.2% of all deaths) appeared in both files. Of those deaths missing in the VA files, 71% had no service-connected disability, VA pension, or other compensation. Among outpatients, agreement between the death files was very good (kappa = 0.82, $p < 0.001$). Three hundred seventy-two individuals (69.8% of all deaths) appeared in both files. Of those deaths missing in the VA files, 63% had no service-connected disability or VA pension or other compensation. CONCLUSIONS: The VA death files are a valid source of vital status information for veterans hospitalized in recent years. For veterans having exclusively outpatient visits, however, the VA files miss a substantial proportion of deaths. For these patients, alternative means of vital status ascertainment are warranted
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11399441&dopt=r

El Serag HB, Richardson PA, Everhart JE.
The role of diabetes in hepatocellular carcinoma: a case-control study among United States Veterans.
Am J Gastroenterol 2001; 96(8):2462-2467.

Abstract: OBJECTIVE: Diabetes mellitus (DM) has been reported to increase the risk of hepatocellular carcinoma (HCC). We carried out a case-control study to examine the role of DM while controlling for several known risk factors of HCC. METHODS: All hospitalized patients with primary liver cancer (PLC) during 1997-1999 were identified in the computerized database of the Department of Veterans Affairs, the Patient Treatment File. Controls without cancer were randomly assigned from the Patient Treatment File during the same time period. The inpatient and outpatient files were searched for several conditions including DM, hepatitis C virus (HCV), hepatitis B virus (HBV), alcoholic cirrhosis, autoimmune hepatitis, hemochromatosis, and nonspecific cirrhosis. Adjusted odds ratios (OR) were calculated in a multivariable logistic regression model. RESULTS: We identified 823 patients with PLC and 3459 controls. The case group was older (62 yr [+/-10] vs 60 [+/-11], $p < 0.0001$), had more men (99% vs 97%, 0.0004), and a greater frequency of nonwhites (66% vs 71%, 0.0009) compared with controls. However, HCV- and HBV-infected patients were younger among cases than controls. Risk factors that were significantly more frequent among PLC cases included HCV (34% vs 5%, $p < 0.0001$), HBV (11% vs 2%, $p < 0.0001$), alcoholic cirrhosis (47% vs 6%, $p < 0.0001$), hemochromatosis (2% vs 0.3%, $p < 0.0001$), autoimmune hepatitis (5% vs 0.5%, $p < 0.0001$), and diabetes (33% vs

30%, p = 0.059). In the multivariable logistic regression, diabetes was associated with a significant increase in the adjusted OR of PLC (1.57, 1.08-2.28, p = 0.02) in the presence of HCV, HBV, or alcoholic cirrhosis. Without markers of chronic liver disease, the adjusted OR for diabetes and PLC was not significantly increased (1.08, 0.86-1.18, p = 0.4). There was an increase in the HCV adjusted OR (17.27, 95% Cl = 11.98-24.89) and HBV (9.22, 95% CI = 4.52-18.80) after adjusting for the younger age of HCV- and HBV-infected cases. The combined presence of HCV and alcoholic cirrhosis further increases the risk with an adjusted OR of 79.21 (60.29-103.41). The population attributable fraction for HCV among hospitalized veterans was 44.8%, whereas that of alcoholic cirrhosis was 51%. CONCLUSION: DM increased the risk of PLC only in the presence of other risk factors such as hepatitis C or B or alcoholic cirrhosis. Hepatitis C infection and alcoholic cirrhosis account for most of PLC among veterans
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11513191&dopt=r

El Serag HB, Hepworth EJ, Lee P, Sonnenberg A.
Gastroesophageal reflux disease is a risk factor for laryngeal and pharyngeal cancer.
Am J Gastroenterol 2001; 96(7):2013-2018.

Abstract: OBJECTIVE: Gastroesophageal reflux disease (GERD) is a proposed risk factor for developing laryngeal and pharyngeal cancers. No controlled study has examined this association. METHODS: A case-control-study was performed using the computerized hospitalization and outpatient databases of the US Department of Veterans Affairs. All patients, who were veterans, had been identified as being hospitalized with laryngeal or pharyngeal during 1991 to 1997. In addition, all persons diagnosed with laryngeal or pharyngeal cancer in 1999 in the outpatient files were identified. From the same patient populations, four nonmatched control subjects were randomly assigned for each case. The medical history for cases and controls was retrospectively searched for GERD diagnoses, tobacco use, and alcohol dependence. Multivariable logistic regression analyses were performed to assess the risk factors for laryngeal and pharyngeal cancers. RESULTS: A total of 8,228 hospitalized patients with laryngeal cancers and 1,912 with pharyngeal cancers were compared to 32,912 and 7,648 hospitalized controls, while 9,292 outpatients with laryngeal cancer and 2,769 outpatients with pharyngeal cancer were compared with 37,168 and 11,076 outpatient controls without cancer. Among hospitalized persons, the prevalence of GERD was higher among patients with laryngeal cancer (8.9 vs 4.0%, p < 0.0001) and pharyngeal cancer (6.2 vs 3.8%, p < 0.0001). In a multivariable logistic regression analysis that was controlled for age, gender, ethnicity, smoking, and alcohol, GERD was associated with an adjusted odds ratio (OR) of 2.40 for laryngeal cancer among hospitalized patients (95% CI 2.15-2.69, p < 0.0001) and an adjusted OR of 2.38 (95% CI 1.87-3.02, p < 0.0001) for pharyngeal cancer. For outpatients, GERD was associated with an adjusted OR = 2.31 (95% CI 2.10-2.53) for laryngeal cancer and adjusted OR = 1.92 (95% CI 1.72-2.15). CONCLUSIONS: Among US veterans, the risk for laryngeal or pharyngeal cancers is modestly increased in the presence of GERD. This effect seems to be independent of age, gender, smoking, and alcohol intake
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11467626&dopt=r

Rosen AK, Loveland S, Anderson JJ, Rothendler JA, Hankin CS, Rakovski CC et al.
Evaluating diagnosis-based case-mix measures: how well do they apply to the VA population?
Med Care 2001; 39(7):692-704.

Abstract: BACKGROUND: Diagnosis-based case-mix measures are increasingly used for provider profiling, resource allocation, and capitation rate setting. Measures developed in one setting may not adequately capture the disease burden in other settings. OBJECTIVES: To examine the feasibility of adapting two such measures, Adjusted Clinical Groups (ACGs) and Diagnostic Cost Groups (DCGs), to the Department of Veterans Affairs (VA) population. RESEARCH DESIGN: A 60% random sample of veterans who used health care services during FY 1997 was obtained from VA inpatient and outpatient administrative databases. A split-sample technique was used to obtain a 40% sample (n = 1,046,803) for development and a 20% sample (n = 524,461) for validation. METHODS: Concurrent ACG and DCG risk adjustment models, using 1997 diagnoses and demographics to predict FY 1997 utilization (ambulatory provider encounters, and service days-the sum of a patient's inpatient and outpatient visit days), were fitted and cross-validated. RESULTS: Patients were classified into groupings that indicated a population with multiple psychiatric and medical diseases. Model R-squares explained between 6% and 32% of the variation in service utilization. Although reparameterized models did better in predicting utilization than models with external weights, none of the models was adequate in characterizing the entire population. For predicting service days, DCGs were superior to ACGs in most

categories, whereas ACGs did better at discriminating among veterans who had the lowest utilization. CONCLUSIONS: Although "off-the-shelf" case-mix measures perform moderately well when applied to another setting, modifications may be required to accurately characterize a population's disease burden with respect to the resource needs of all patients
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11458134&dopt=r

Year 2000

Boyko EJ, Koepsell TD, Gaziano JM, Horner RD, Feussner JR.
US Department of Veterans Affairs medical care system as a resource to epidemiologists.
Am J Epidemiol 2000; 151(3):307-314.

Abstract: Epidemiologists have utilized several health care systems with large numbers of enrollees and centralized databases to achieve their research aims. Although containing many of the features that have made certain health care systems valuable to the conduct of epidemiologic research, the US Department of Veterans Affairs (VA) medical care system has not been well utilized by epidemiologists. This article will describe existing and planned features of this health care system that should be of interest to epidemiologists, including centralized databases that capture hospital discharge and outpatient clinic diagnostic data, a planned enrollment file that would contain all persons eligible for VA medical care, and the size and national dispersion of VA medical care facilities. Also, VA leadership has demonstrated an interest in the promotion of epidemiologic research by initiating several new programs, including the creation of three Epidemiologic Research and Information Centers (ERICs) to foster VA epidemiologic research, and announcing a program to support investigator-initiated epidemiologic research projects with VA funding. Epidemiologists with interests in medical problems that afflict veterans should consider partnerships with VA investigators to achieve their research aims
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10670556&dopt=r

Chen RS, Nadkarni PM, Levin FL, Miller PL, Erdos J, Rosenheck RA.
Using a computer database to monitor compliance with pharmacotherapeutic guidelines for schizophrenia. Psychiatr Serv 2000; 51(6):791-794.

Abstract: OBJECTIVE: The study examined whether prescription data from a computerized database could be used to measure conformance with treatment recommendations of the Schizophrenia Patient Outcomes Research Team (PORT). METHODS: Records of an academically affiliated Veterans Affairs medical center were reviewed to identify patients who were hospitalized for schizophrenia and later seen for at least two outpatient visits in the six months after discharge (N=353). RESULTS: Conformance with only three of the 18 PORT pharmacotherapeutic recommendations could be measured with the available data. In regard to the recommendation to use antipsychotics other than clozapine as first-line treatments in acute episodes, 77 percent of the sample filled a prescription for an antipsychotic during the acute episode. Of these, only 6 percent received an antipsychotic regimen that included clozapine. In regard to the PORT recommendation on dosage during acute symptom episodes, 42 percent of the patients on conventional antipsychotics received dosages below the recommended range, 5 percent were above the range, and 53 percent were within it. In contrast, of the 53 patients who received clozapine or risperidone, 87 percent received prescriptions within the recommended dosage range. As for the recommendation to offer a trial of clozapine to patients who do not respond to adequate trials of two different classes of conventional drugs, 10 percent of patients who were switched from conventional regimens to clozapine were receiving dosages of conventional medications below the recommended range. CONCLUSIONS: Patient prescription data can provide preliminary measures to cost-effectively assess conformance with treatment. However, the approach has several limitations, and complementary analyses would enhance its usefulness
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10828112&dopt=r

Every NR, Fihn SD, Sales AE, Keane A, Ritchie JR.
Quality Enhancement Research Initiative in ischemic heart disease: a quality initiative from the Department of Veterans Affairs. QUERI IHD Executive Committee.

Med Care 2000; 38(6 Suppl 1):I49-I59.

Abstract: Despite the dramatic fall in ischemic heart disease (IHD) mortality rates over the last 3 decades, it remains the number one cause of death in the United States, and one of the most frequent indications for care by the US Department of Veterans Affairs. National practice guidelines have been developed and disseminated both by societies that specialize in cardiology and within the Veterans Health Administration. Despite these efforts, a substantial minority remains of patients with IHD who are not treated with guideline-recommended therapies. The Quality Enhancement Research Initiative in IHD is a Veterans Health Administration-sponsored initiative to address the gap between guideline-recommended therapies and actual Department of Veterans Affairs practice. Because guideline development for patients with IHD is relatively mature, the Quality Enhancement Research Initiative in IHD will concentrate on measuring existing practices, implementing interventions, and evaluating outcomes in veterans with IHD. Measurement of existing practices will be evaluated through analyses of existing Veterans Affairs databases developed for the Continuous Improvement in Cardiac Surgery Program, as well as data collected at the Center for the Study of Practice Patterns in veterans with acute myocardial infarction. To measure existing practices in outpatients with IHD, we plan to develop a new database that extracts electronic data from patient laboratory and pharmacy records into a relational database. Interventions to address gaps between guideline recommendations and actual practice will be solicited and implemented at individual medical centers. We plan to emphasize point-of-care electronic reminders as well as online decision support as methods for improving guideline compliance
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10843270&dopt=r

Kirchner JE, Booth BM, Owen RR, Lancaster AE, Smith GR.
Predictors of patient entry into alcohol treatment after initial diagnosis.
J Behav Health Serv Res 2000; 27(3):339-346.

Abstract: To improve the quality of care for alcohol-related disorders, key transitions in the continuum of care, including treatment entry, must be fully understood. The purpose of this study was to investigate identifiable predictors of patient entry into a substance-use treatment program following the initial diagnosis of an alcohol-related disorder on a medical or surgical inpatient unit. An administrative computerized database was used to identify the sample for this study. Inpatient and outpatient records were obtained from the Little Rock VAMC/DHCP. Predictors of patient entry into treatment within six months of the initial diagnosis of an alcohol related disorder included age younger than than 60 (odds ratio [OR] = 4.6), not married (OR = 1.7), primary diagnosis of an alcohol-related disorder (OR = 7.7), diagnosis of a comorbid drug (OR = 4.3) or psychiatric disorder (OR = 3.6), diagnosis by a medical as opposed to a surgical specialty (OR = 6.0), and African American (OR = 1.7)
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10932447&dopt=r

Leslie DL, Rosenheck R, White WD.
Capitated payments for mental health patients: a comparison of potential approaches in a public sector population.
J Ment Health Policy Econ 2000; 3(1):35-44.

Abstract: BACKGROUND: Both private and public health care systems have embraced capitated reimbursement as a method of controlling costs. AIMS OF THE STUDY: This study explores the financial implications of using reimbursement models based on clinically based patient classification schemes to distribute funds for the treatment of mental health patients in the Department of Veterans Affairs (VA). METHODS: We identified 53700 veterans treated in VA specialty mental health outpatient clinics during the first 2 weeks of fiscal year (FY) 1991 for whom relevant clinical data were available. We calculated total utilization and costs for this sample during the remainder of FY 1991 using VA administrative databases and simulated hypothetical distributions of funds based on seven alternative capitation models. The resulting distributions of funds across service networks and facility types were compared to actual expenditures. RESULTS: Approximately 8% of overall VA budget was redistributed under a simple capitated scheme, and some individual networks and facility types experienced changes in funding of over 30%. Models based on clinical data resulted in only minor differences from average-cost reimbursement. Substantial variation in practice style was observed across Veterans Integrated Service Networks (VISNs), which was significantly associated with funding shifts under capitation. DISCUSSION: A simple capitated payment scheme would result in large changes in funding for some VISNs. Adjustments for case mix did not substantially affect patterns of redistribution. Patterns of

redistribution appear to reflect large differences in practice style across VISNs. Although a capitated system will create incentives to reduce such variation, the effect of such shifts on patient well-being is unknown. IMPLICATIONS FOR HEALTH POLICIES: Any capitated system will create incentives to provide a uniform standard of care. In our analyses, the capitation rate was based on the average cost per treated patient in each category; however rates could be set higher or lower as policy makers deem necessary. The standard of care associated with the average cost is not necessarily the "correct" level of care. IMPLICATIONS FOR FURTHER RESEARCH: Our analyses explore the implications of capitated systems for mental health patients in the absence of behavioral change. Further research is needed to determine how providers actually respond to the different incentives created by capitation and what impact these changes have on patient well-being. lems
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11967435&dopt=r

Moos RH, Finney JW, Federman EB, Suchinsky R.
Specialty mental health care improves patients' outcomes: findings from a nationwide program to monitor the quality of care for patients with substance use disorders.
J Stud Alcohol 2000; 61(5):704-713.

Abstract: OBJECTIVE: To describe the implementation of a nationwide program to monitor the quality of treatment for substance use disorders in the Department of Veterans Affairs, and to examine how the provision of outpatient mental health care, and the duration and intensity of care, relate to patients' outcomes. METHOD: Clinicians completed a baseline Addiction Severity Index (ASI) on more than 34,000 patients with substance use disorders; more than 21,000 (63%) were reassessed with the ASI an average of 12 months later. Nationwide health service utilization databases were used to obtain information about patients' diagnoses and their use of services during an index episode of care. RESULTS: On average, patients who received specialty outpatient mental health care experienced better risk-adjusted outcomes than did patients who did not receive such care. Patients who had longer index episodes of mental health care improved more than did those who had shorter episodes. There was some evidence that the duration of care contributed more to better outcomes among patients with only substance use disorders, whereas the intensity of care was more important for patients with both substance use and psychiatric disorders. CONCLUSIONS: The provision of specialty outpatient mental health care, and longer episodes of specialty care, were associated with better risk-adjusted substance use, symptom and social functioning outcomes for patients with substance use disorders. More emphasis should be placed on ensuring that these patients enter specialty care and on keeping them in treatment
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11022810&dopt=r

Reiner BI, Siegel EL, Flagle C, Hooper FJ, Cox RE, Scanlon M.
Effect of filmless imaging on the utilization of radiologic services.
Radiology 2000; 215(1):163-167.

Abstract: PURPOSE: To determine the effect of a large-scale picture archiving and communication system (PACS) on in- and outpatient utilization of radiologic services. MATERIALS AND METHODS: Data were collected at the Baltimore Veterans Affairs (VA) Medical Center (BVAMC) before and after implementation of an enterprise-wide PACS; the numbers and types of imaging examinations performed for fiscal years 1993 and 1996 were evaluated. These data were compared with those from a similar academic medical center, the Philadelphia VA Medical Center (PVAMC), and with aggregate data obtained nationally for all VA hospitals over comparable periods. RESULTS: Inpatient utilization, defined as the number of examinations per inpatient day, increased by 82% (from 0.265 to 0.483 examinations per patient day) after a transition to filmless operation at BVAMC. This is substantially greater than the increases of 38% (from 0.263 to 0.362 examinations per patient day) and 11% (from 0.190 to 0.211 examinations per patient day) at the film-based PVAMC and nationally, respectively. Outpatient utilization, defined as the number of examinations per visit, increased by 21% (from 0.108 to 0.131 examinations per visit) at BVAMC, compared with a 1% increase (from 0.087 to 0.088 examinations per visit) at PVAMC and a net decrease of 19% (from 0. 148 to 0.120 examinations per visit) nationally. CONCLUSION: The transition to filmless operation was associated with increases in inpatient and outpatient utilization of radiologic services, which substantially exceeded changes at PVAMC and nationally over the same interval
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10751482&dopt=r

Rosenheck R.
Primary care satellite clinics and improved access to general and mental health services.
Health Serv Res 2000; 35(4):777-790.

Abstract: OBJECTIVES: To evaluate the relationship between the implementation of community-based primary care clinics and improved access to general health care and/or mental health care, in both the general population and among people with disabling mental illness. STUDY SETTING: The 69 new community-based primary care clinics in underserved areas, established by the Department of Veterans Affairs (VA) between the last quarter of FY 1995 and the second quarter of FY 1998, including the 21 new clinics with a specialty mental health care component. DATA SOURCES: VA inpatient and outpatient workload files, 1990 U.S. Census data, and VA Compensation and Pension files were used to determine the proportion of all veterans, and the proportion of disabled veterans, living in each U.S. county who used VA general health care services and VA mental health services before and after these clinics began operation. DESIGN: Analysis of covariance was used to compare changes, from late FY 1995 through early FY 1998, in access to VA services in counties in which new primary care clinics were located, in counties in which clinics that included specialized mental health components were located, and for comparison, in other U.S. counties, adjusting for potentially confounding factors. KEY FINDINGS: Counties in which new clinics were located showed a significant increase from the FY 1995-FY 1998 study dates in the proportion of veterans who used general VA health care services. This increase was almost twice as large as that observed in comparison counties (4.2% vs. 2.5%: F = 12.6, df = 1,3118, p = .0004). However, the introduction of these clinics was not associated with a greater use of specialty VA mental health services in the general veteran population, or of either general health care services or mental health services among veterans who received VA compensation for psychiatric disorders. In contrast, in counties with new clinics that included a mental health component the proportion of veterans who used VA mental health services increased to almost three times the proportion in comparison counties (0.87% vs. 0.31%: F = 8.3, df = 1,3091, p = .004). CONCLUSIONS: Community-based primary care clinics can improve access to general health care services, but a specialty mental health care component appears to be needed to improve access to mental health services
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11055448&dopt=r

Zhang Q, Safford M, Ottenweller J, Hawley G, Repke D, Burgess JF, Jr. et al.
Performance status of health care facilities changes with risk adjustment of HbA1c.
Diabetes Care 2000; 23(7):919-927.

Abstract: OBJECTIVE: To develop a risk adjustment method for HbA1c, based solely on administrative data and to determine the extent to which risk-adjusted HbA1c changes the identification of high- or low-performing medical facilities. RESEARCH DESIGN AND METHODS: Through use of pharmacy records, 204,472 diabetic patients were identified for federal fiscal year 1996 (FY96). Complete information (HbA1c levels, demographic data, inpatient records, outpatient pharmacy utilization records) was available on 38,173 predominantly male patients from 48 Veterans Health Administration (VHA) medical facilities. Hierarchical mixed-effects models were used to estimate risk-adjusted unique facility-level HbA1c. RESULTS: Predicted HbA1c demonstrated expected patterns for major factors known to influence glycemic control. Poorer glycemic control was seen in minorities and patients with greater disease severity, longer duration of disease (using treatment type or presence of amputation as surrogates), and more extensive comorbidity (measured by an adapted Charlson index). Better glycemic control was seen in Caucasians, older diabetic patients, and patients with higher outpatient utilization. The number of performance outliers was reduced as a result of risk adjustment. For mean HbA1c levels, 7 facilities that were initially identified as statistically significant outliers were no longer outliers after risk adjustment. For high-risk HbA1c (>9.5%) rates, 12 facilities that were initially identified as statistically significant outliers were no longer outliers after risk adjustment. CONCLUSIONS: Risk adjustment using only administrative data resulted in substantial changes in identification of high or low performers compared with non-risk-adjusted HbA1c. Although our findings are exploratory, risk adjustment using administrative data may be a necessary and achievable step in quality assessment of diabetes care measured by rates of high-risk HbA1c (>9.5%)
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10895841&dopt=r

Year 1999

Ashton CM, Petersen NJ, Souchek J, Menke TJ, Pietz K, Yu HJ et al.
Rates of health services utilization and survival in patients with heart failure in the Department of Veterans Affairs medical care system.
Am J Med Qual 1999; 14(1):55-63.

Abstract: The objective of this study was to describe patterns of hospital and clinic use and survival for a large nationwide cohort of patients with heart failure. A retrospective cohort study of patients treated in the Veterans Affairs medical care system was conducted using linked administrative databases as data sources. In 1996, the average heart failure cohort member had 1-2 hospitalizations, 14 inpatient days, 6-7 visits with the primary physician, 15 other visits for consultations or tests, and 1-2 urgent care visits per 12 months. The overall risk-adjusted 5-year survival rate was 36%. Hospital use rates in the cohort fell dramatically between 1992 and 1996. One-year survival rates increased slightly over the period. Patients with heart failure are heavy users of services and have a very poor prognosis. Utilization and outcome data indicate the need for major efforts to assure quality of care and to devise innovative ways of delivering comprehensive services
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10446664&dopt=r

Barnett PG, Rodgers JH.
Use of the Decision Support System for VA cost-effectiveness research.
Med Care 1999; 37(4 Suppl Va):AS63-AS70.

Abstract: BACKGROUND: The Department of Veterans Affairs is adopting the Decision Support System (DSS), computer software and databases which include a cost-accounting system which determines the cost of health care products and patient encounters. OBJECTIVES: A system for providing cost data for cost-effectiveness analysis should be provide valid, detailed, and comprehensive data that can be aggregated. METHODS: The design of DSS is described and compared with those criteria. Utilization data from DSS was compared with other VA utilization data. Aggregate DSS cost data from 35 medical centers was compared with relative resource weights developed for the Medicare program. RESULTS: Data on hospital stays at 3 facilities found that 3.7% of the stays in DSS were not in the VA discharge database, whereas 7.6% of the stays in the discharge data were not in DSS. DSS reported between 68.8% and 97.1% of the outpatient encounters reported by six facilities in the ambulatory care data base. Relative weights for each Diagnosis Related Group based on DSS data from 35 VA facilities correlated with Medicare weights (correlation coefficient of .853). CONCLUSIONS: DSS will be useful for research if certain problems are overcome. It is difficult to distinguish long-term from acute hospital care. VA does not have a complete database of all inpatient procedures, so DSS has not assigned them a specific cost. The authority to access encounter-level DSS data needs to be centralized. Researchers can provide the feedback needed to improve DSS cost estimates. A comprehensive encounter-level extract would facilitate use of DSS for research
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10217386&dopt=r

Druss BG, Rohrbaugh RM, Rosenheck RA.
Depressive symptoms and health costs in older medical patients.
Am J Psychiatry 1999; 156(3):477-479.

Abstract: OBJECTIVE: The authors assessed the association between depressive symptoms and health costs for a national Veterans Administration (VA) sample. METHOD: The Rand Depression Index was administered to 1,316 medical or surgical inpatients over the age of 60 at nine VA hospitals. Scores were merged with utilization, demographic, and hospital data from national VA inpatient and outpatient files. RESULTS: Medical costs for respondents with the highest quartile of symptoms were approximately $3,200-or 50%-greater than medical costs for those in the least symptomatic quartile. Depressive symptoms were not associated with any statistically significant mental health expenditures. CONCLUSIONS: The study extends previous reports of the high medical costs associated

with depressive disorders to an older, public sector population. The mechanisms underlying increased medical costs associated with depressive symptoms, while the subject of much speculation in the literature, still remain largely unknown
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10080569&dopt=r

Druss BG, Rosenheck RA, Stolar M.
Patient satisfaction and administrative measures as indicators of the quality of mental health care.
Psychiatr Serv 1999; 50(8):1053-1058.

Abstract: BACKGROUND: The Department of Veterans Affairs is adopting the Decision Support System (DSS), computer software and databases which include a cost-accounting system which determines the cost of health care products and patient encounters. OBJECTIVES: A system for providing cost data for cost-effectiveness analysis should be provide valid, detailed, and comprehensive data that can be aggregated. METHODS: The design of DSS is described and compared with those criteria. Utilization data from DSS was compared with other VA utilization data. Aggregate DSS cost data from 35 medical centers was compared with relative resource weights developed for the Medicare program. RESULTS: Data on hospital stays at 3 facilities found that 3.7% of the stays in DSS were not in the VA discharge database, whereas 7.6% of the stays in the discharge data were not in DSS. DSS reported between 68.8% and 97.1% of the outpatient encounters reported by six facilities in the ambulatory care data base. Relative weights for each Diagnosis Related Group based on DSS data from 35 VA facilities correlated with Medicare weights (correlation coefficient of .853). CONCLUSIONS: DSS will be useful for research if certain problems are overcome. It is difficult to distinguish long-term from acute hospital care. VA does not have a complete database of all inpatient procedures, so DSS has not assigned them a specific cost. The authority to access encounter-level DSS data needs to be centralized. Researchers can provide the feedback needed to improve DSS cost estimates. A comprehensive encounter-level extract would facilitate use of DSS for research
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10445654&dopt=r

El Serag HB, Sonnenberg A.
Outcome of erosive reflux esophagitis after Nissen fundoplication.
Am J Gastroenterol 1999; 94(7):1771-1776.

OBJECTIVE: The aim of this study was to compare the utilization of health care resources and long term outcome of erosive esophagitis in patients treated with and without open Nissen fundoplication. METHODS: A population of 35,725 patients with erosive esophagitis was extracted from the computerized database of the US Department of Veterans Affairs. Subjects were stratified by severity of disease into erosive esophagitis alone versus erosive esophagitis complicated by esophageal ulcers or peptic strictures. During a mean follow-up period of 4.2 yr (range 1-12 yr), the consumption of health care resources, except for medications, was compared between case and control subjects treated with and without fundoplication, respectively. RESULTS: Among patients with complicated erosive esophagitis, 5,064 control subjects were treated without, and 542 case subjects were treated with, fundoplication. Cases incurred less recurrence of esophageal erosions (controls: 56% vs cases: 46%), esophageal ulcers (38% vs 33%), and peptic strictures (43% vs 32%) during follow-up. Among patients with erosive esophagitis but no complications, 29,514 control subjects were treated without, and 605 case subjects were treated with, fundoplication. Cases did not experience any change in the recurrence of esophageal erosions (controls: 25% vs cases: 24%). Irrespective of treatment type, none of the case or control subjects with erosive esophagitis alone developed esophageal ulcers or peptic strictures during follow-up. Compared with controls, however, after fundoplication in erosive esophagitis alone, cases incurred more dysphagia (2.6% vs 4.6%), postsurgical syndromes (0.8% vs 1.7%), as well as more outpatient visits (34 vs 40 visits/patient) and outpatient procedures (2.7 vs 4.3 procedures/patient). CONCLUSIONS: Fundoplication improves the clinical outcome of erosive esophagitis in patients with concomitant esophageal ulcers and strictures, but not in patients without such complications. Fundoplication does not reduce the consumption of health care resources
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10406233&dopt=r

Hoff RA, Rosenheck RA.
The cost of treating substance abuse patients with and without comorbid psychiatric disorders.
Psychiatr Serv 1999; 50(10):1309-1315.

OBJECTIVE: Data from a national sample of patients with a primary diagnosis of a substance use disorder were analyzed to examine whether having a comorbid psychiatric diagnosis-a dual diagnosis-was associated with increased costs of health services over a six-year period and whether dually diagnosed patients used particular types of services more frequently. METHODS: A national sample of substance abuse patients being treated in Veterans Affairs (VA) facilities were classified into two groups-those with a dual diagnosis (N=3, 069) and those with a single diagnosis of a substance use disorder (N=9,538). The sample was identified from two sources during a two-week period in 1990: outpatients in specialty substance abuse clinics and inpatients discharged with a substance-related diagnosis. Administrative data were used to track VA health care utilization and costs between 1991 and 1996. RESULTS: Dual diagnosis was associated with a significantly increased total cost of care over the six years, which was primarily explained by increased utilization of outpatient psychiatric and substance abuse services. Costs for both groups decreased over time, but they decreased faster among dually diagnosed patients. CONCLUSIONS: Having a comorbid psychiatric diagnosis appears to consistently increase the cost and utilization of services among patients with a primary diagnosis of a substance use disorder. These results are consistent with previous findings for dually diagnosed patients with a primary psychiatric diagnosis. The increased cost may simply reflect the greater severity of illness among dually diagnosed patients, but it may also indicate fragmented and inefficient service delivery
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10506299&dopt=r

Menke TJ, Homan RH, Kashner TM.
Determining costs in VA: research design problems and solutions illustrated with case studies.
Med Care 1999; 37(4 Suppl Va):AS18-AS26.

BACKGROUND: Department of Veterans Affairs (VA) administrative cost data bases contain inaccuracies and do not provide patient-level data. OBJECTIVE: To describe methods of VA cost determination that are appropriate for specific types of studies and to exemplify these methods with case studies. RESEARCH DESIGN: VA utilization and cost data sources are described, and their limitations highlighted. Strategies for determining costs are discussed for health care that is critical to the study, for other types of health care, and for new programs or interventions. Three case studies are presented to illustrate cost-finding methods. RESULTS: A hybrid approach to determining VA costs is discussed. For health care that is critical to the study, administrative data can be replaced or supplemented with primary data, information from the fiscal or other services, or non-VA data. Primary data are also needed to evaluate new programs or interventions. Less intensive data gathering methods can be used for health care that is not central to the study. The first case study illustrates cost determination for a randomized controlled trial, using an example of alternative ways of maintaining hemodialysis access graft patency. The second case study illustrates the determination of costs for all outpatient procedures to use in billing for veterans with private health insurance. The third case study describes the estimation of cost savings from regionalizing open heart surgery. CONCLUSIONS: Despite problems with VA administrative cost data, accurate VA costs can be determined
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10217381&dopt=r

Menke TJ, Wray NP.
Use of a cost accounting system to evaluate costs of a VA special program.
Med Care 1999; 37(4 Suppl Va):AS45-AS53.

BACKGROUND: The Department of Veterans Affairs (VA) established six mobile clinics to provide care for rural veterans. Each was operated by a parent VA Medical Center (VAMC). OBJECTIVE: To describe the use of a cost-accounting system which does not provide costs at the service or patient level to determine the costs of the mobile clinics. RESEARCH DESIGN: Costs per visit were compared among the mobile clinics with the parent VAMCs and with simulated fixed-location clinics. Cost data came from VA's Centralized Accounting for Local Management (CALM) data. Utilization data came from VA's outpatient file. RESULTS: Information was obtained from the VAMCs' fiscal services to reallocate costs among the CALM subaccounts to generate cost data that was comparable among the mobile clinics. Costs per visit for the mobile clinics were twice as high as those of the parent VAMCs. Costs per visit would be lower at fixed-location clinics unless the volume were substantially less than that provided by the mobile clinics. CONCLUSION: Differences between cost allocations for accounting purposes and research are likely to necessitate adjusting cost accounting data for research purposes. Fortunately, information from the accountants or

primary data can lead to a cost database which is appropriate for research evaluations. In the mobile clinics study, the analysis of cost accounting data led to the conclusion that mobile clinics were not a cost-effective way in which to provide care to rural veterans
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10217384&dopt=r

Mole L, Ockrim K, Holodniy M.
Decreased medical expenditures for care of HIV-seropositive patients. The impact of highly active antiretroviral therapy at a US Veterans Affairs Medical Center.
Pharmacoeconomics 1999; 16(3):307-315.

OBJECTIVE: To identify any changes in expenditures and in morbidity and mortality with the progression of treatment of the HIV-seropositive population from monotherapy with a nucleoside reverse transcriptase inhibitor (NRTI) [1993] through dual NRTI therapy (1995) to highly active antiretroviral therapy (HAART) [1997]. DESIGN AND SETTING: This study retrospectively compared 3 separate years of the total expenditures encountered in the management of HIV-seropositive individuals seen at a US Veterans Affairs Medical Center. INTERVENTIONS: Utilising a computerised hospital database, we identified those patients with HIV-related International Classification of Diseases, version 9 (ICD-9) codes and collected all healthcare-related expenditure data. The 3 eras selected for comparison were controlled for similar utilisation of prophylaxis against opportunistic infections, access to investigational antivirals, consistency between primary care providers and distribution of new anti-HIV therapies relative to that era. Cost data for inpatient and outpatient activities (visits and admissions) were derived from actual expenditures. Major categories were then compared, including total inpatient/outpatient expenditures and utilisation, laboratory and prescription costs, and morbidity and mortality rates. MAIN OUTCOME MEASURES AND RESULTS: The 3 periods had similar patient populations, with 86, 86 and 82% of patients in 1993, 1995 and 1997, respectively, having some degree of immunosuppression (defined as CD4+ lymphocyte counts < 500 cells/mm3). Morbidity and mortality were not changed by the addition of dual NRTI therapy. HAART therapy produced 60 and 70% declines in relative mortality when compared with the single and dual NRTI eras. Dual NRTI or HAART therapy decreased overall expenditures as compared with NRTI monotherapy. HIV-related outpatient resource utilisation other than pharmacy and laboratory costs fell by 25 and 59% in 1997 as compared with 1993 and 1995, respectively. The greatest fall in resource utilisation was for inpatient bed-days of care, where the average cost per patient fell by $US2782 between 1993 and 1997. Pharmacy and laboratory expenditures increased by $US1825 and $US231 per patient from 1993 to 1997, respectively. Overall, the impact of HAART was a decrease of $US1193 in the average total cost per patient from 1993 to 1997. CONCLUSIONS: The introduction of HAART provided a positive outcome on patient morbidity and mortality and on medical centre expenditures. The end result was a cost shift of expenditures from inpatient utilisation to outpatient pharmacy and laboratory costs. This information is important for patients and providers, who need to make clinical decisions on lifelong therapies, and for healthcare financial planners, who need to predict inpatient and outpatient healthcare utilisation during an era of limited healthcare dollars
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10558042&dopt=r

Rosenheck R, Fontana A, Stolar M.
Assessing quality of care: administrative indicators and clinical outcomes in posttraumatic stress disorder.
Med Care 1999; 37(2):180-188.

BACKGROUND: Although the use of quality of care indicators based on data collected for administrative purposes has become widespread, the relationship between those measures and clinical outcomes has yet to be evaluated. RESEARCH DESIGN: This study used hierarchical linear modeling to examine the relationship between 12 performance indicators derived from administrative data sets and 6 clinical outcome measures addressing symptoms, substance abuse, and social functions. SUBJECTS: Patient interviews were conducted with 4,165 veterans 4 months after their discharge from 62 specialized VA inpatient programs for treatment of Posttraumatic Stress disorder. RESULTS: Five of twelve administrative measures were significantly associated with at least one of the clinical outcome measures, which was all in the expected directions. The number of hospital readmissions during the 6 months after the index discharge was significantly related to poor outcomes on all 5 of 6 measures. Measures of readmission and post-discharge hospital use were more strongly and consistently related to outcome than to measures of access, intensity, or continuity of outpatient care. CONCLUSION: Administrative data, especially measures of hospital

readmission, are significantly related to clinical outcomes. Correlations, however, are small to modest in magnitude indicating that these 2 types of performance measures assess different aspects of quality and can not be substituted for one another
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10024122&dopt=r

Wilt TJ, Cowper DC, Gammack JK, Going DR, Nugent S, Borowsky SJ.
An evaluation of radical prostatectomy at Veterans Affairs Medical Centers: time trends and geographic variation in utilization and outcomes.
Med Care 1999; 37(10):1046-1056.

OBJECTIVE: To examine temporal trends and geographic variation in utilization of radical prostatectomy (RP) as well as 30-day mortality and complication rates. DESIGN: Administrative data-base study of radical prostatectomy (RP) using the Department of Veterans Affairs Patient Treatment File and Outpatient Clinic File between 1986 to 1996. Logistic regression was used to estimate temporal and geographic effects on the use of RP. SETTING: All Departments of Veterans Affairs Medical Centers (VAMC) in the contiguous United States. PATIENTS: Men aged 45 to 84 years who underwent RP at a VAMC (n = 13,398). MAIN OUTCOME MEASURES: Number and utilization of RP, rate of 30-day mortality, major cardiopulmonary or vascular complications, and colorectal injuries requiring surgical repair within 30 days of RP. RESULTS: From 1986 to 1996, the annual number of RP at VAMCs (range, 695-1,545 RP) more than doubled, and the rate of RP at VAMCs per male VA user increased by 40% (range, 48/100,000-66/100,000). After controlling for age and year, the utilization of RP in West North Central, Mountain, West South Central, and Pacific census divisions was 70%, 14%, 10%, and 8% higher, respectively, whereas the utilization of RP in New England, East North Central, and Mid-Atlantic divisions was 38%, 31%, and 25% lower, respectively, than the rest of the nation (P<0.001). Geographic variation in utilization decreased during the period between 1986 and 1996, but a twofold difference in RP utilization in 1996 remained between high- and low-utilization divisions. Major cardiopulmonary complications, vascular complications, and colorectal injuries occurred in 1.7%, 0.2%, and 1.8% of men, respectively. Thirty-day mortality was 0.73%, declined from 1986 to 1996, and was associated with a history of diabetes and congestive heart failure. CONCLUSION: Utilization of RP at VAMCs increased over time and varied across geographic areas. Thirty-day mortality was less than 1% and decreased with time. Differences in utilization may be caused by uncertainty regarding the effectiveness of early detection and treatment of prostate cancer
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10524371&dopt=r

Year 1998

Ashton CM, Petersen NJ, Wray NP, Yu HJ.
The Veterans Affairs medical care system: hospital and clinic utilization statistics for 1994.
Med Care 1998; 36(6):793-803.

OBJECTIVES: The authors describe the role the Veterans Affairs (VA) medical system plays as a provider of clinic and hospital services by examining utilization levels and users' characteristics. METHODS: The Veterans Affairs hospital discharge database, the Veterans Affairs outpatient clinic files, and the veteran population files were used to estimate the number of persons using the Veterans Affairs medical care system in 1994 and the intensity of their clinic and hospital use. Demographic and clinical characteristics of users were tabulated. RESULTS: In 1994, 2.7 million veterans, 10.3% of all US veterans, and approximately 23% of veterans who would have met the statutory eligibility requirements for Veterans Affairs care, used the hospital and/or clinic components of the Veterans Affairs medical system. Sixty-three percent of the system's users were younger than age 65, and 10.5% were women. These 2.7 million veterans had 901,665 Veterans Affairs hospital stays, 15.5 million bed-days, and 31.2 million outpatient visits in fiscal year 1994. The average number of hospitalizations per hospital user was 1.71; the average number of visits per clinic user was 11.7. Medical, surgical, and psychiatric diagnosis-related groups (DRGs) accounted for 56%, 21%, and 23%, respectively, of hospitalizations, but psychiatric diagnosis-related groups accounted for 43% of all inpatient days. Principal medicine clinic visits and psychiatry clinic visits accounted for 21% and 16% of Veterans Affairs ambulatory care. CONCLUSIONS: Because the patient population served by the Veterans Affairs system is skewed in a number of

ways, its contribution as a provider of health services in the United States varies by gender, age, socioeconomic status, and diagnosis
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=9630121&dopt=r

Kashner TM, Muller A, Richter E, Hendricks A, Lukas CV, Stubblefield DR.
Private health insurance and veterans use of Veterans Affairs care. RATE Project Committee. Rate Alternative Technical Evaluation.
Med Care 1998; 36(7):1085-1097.

OBJECTIVES: This study examined the effect of private health insurance on the use of medical, surgical, psychiatric, and addiction services for patients eligible for publicly supported care. METHODS: The authors assembled administrative databases describing 350,000 noninstitutionalized veterans who had been discharged from a Veterans Affairs (VA) inpatient medicine or surgery bed section during a 1-year period. Patient use of care was followed for 1 year after the index discharge. Patient insurance information came from Medical Care Cost Recovery Billing and Collection files obtained separately from each of 162 VA Medical Centers. Distances between VA and non-VA sources of care were estimated from the Health Care Financing Administration's Hospital Distance File. RESULTS: Insured patients were less likely to seek surgical care but were 12 times (65 years of age and older) and 73 times (63 years of age and younger) more likely to initiate outpatient medical visits than were their counterparts, adjusted for patient demographic, diagnostic, and index facility characteristics. Patients who had private health insurance also were 3.4 (> or = 65) and 2.6 (< or = 64) times less likely to use VA surgical care in response to changes in available surgical staff-to-patient ratios than were their uninsured counterparts. CONCLUSIONS: Private health insurance may substitute (reduce) or complement (increase) the continued use of publicly supported health care services, depending on patient age, care setting, and service type
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=9674625&dopt=r

Kashner TM.
Agreement between administrative files and written medical records: a case of the Department of Veterans Affairs.
Med Care 1998; 36(9):1324-1336.

OBJECTIVES: This study examined the reliability of Department of Veterans Affairs' health information databases concerning patient demographics, use of care, and diagnoses. METHODS: The Department of Veterans Affairs' Patient Treatment files for Main, Bed-section (PTF) and Outpatient Care (OCF) were compared with medical charts and administrative records (MR) for a random national sample of 1,356 outpatient visits and 414 inpatient discharges to Department of Veterans Affairs' facilities between July 1 and September 30, 1995. Records were uniformly abstracted by a focus group of utilization review nurses and medical record coders blinded to administrative file entries. RESULTS: Reliability was adequate for demographics (kappa approximately 0.92), length of stay (agreement=98%), and selected diagnoses (kappa ranged 0.39 to 1.0). Reliability was generally inadequate to identify the treating bedsection or clinic (kappa approximately 0.5). Compared with medical charts, Patient Treatment Files/Outpatient Care Files reported an additional diagnosis per discharge and 0.8 clinic stops per outpatient visit, resulting in higher estimates of disease prevalence (+39% heart disease, +19% diabetes) and outpatient costs (+36% per unique outpatient per quarter). CONCLUSIONS: In the absence of pilot work validating key data elements, investigators are advised to construct health and utilization data from multiple sources. Further validation studies of administrative files should focus on the relation between process of data capture and data validity
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=9749656&dopt=r

Pogach LM, Hawley G, Weinstock R, Sawin C, Schiebe H, Cutler F et al.
Diabetes prevalence and hospital and pharmacy use in the Veterans Health Administration (1994). Use of an ambulatory care pharmacy-derived database.
Diabetes Care 1998; 21(3):368-373.

OBJECTIVE: To develop a diabetes registry from an outpatient pharmacy database to systematically analyze the prevalence of diabetes, patterns of glycemic medication and glucose monitoring, pharmacy costs, and hospital use

related to diabetes care in the Veterans Health Administration (VHA) in fiscal year (FY) 1994. RESEARCH DESIGN AND METHODS: Veterans with diabetes were identified using a software program that extracted the social security number (SSN) of patients receiving insulin, sulfonylurea agents, or glucose-monitoring supplies. The cumulative FY94 cost for a drug was calculated by multiplying the units dispensed times the unit cost for each fill, using the actual drug cost that was in effect at the time of dispensing. Admission data were obtained by crossmatching the SSN registry with the VHA Austin Mainframe Patient Treatment Files to retrieve associated diagnosis-related groups (DRG), Physicians' Current Procedural Terminology (CPT), and International Classification of Diseases, 9th revision, Clinical Modification (ICD-9-CM) codes. RESULTS: From among 1,180,260 unique patients, 139,646 veterans with diabetes receiving insulin, oral agents, or glucose-monitoring strips were identified, accounting for a prevalence of 11.83% from 62 Veterans Administration medical centers. There were 63,078 individuals (52%) who received oral agents, of whom 26.3% also received blood glucose-monitoring supplies; 46,664 individuals (39%) received insulin, of whom 53.2% received blood glucose-monitoring supplies; and 9,440 individuals (8%) received both oral agents and insulin during FY94, with 64.4% receiving blood glucose-monitoring supplies. Only 1,482 (1.2%) individuals received monitoring supplies alone, and 129 patients (0.1%) were provided with an insulin pump. Using an adjusted data set, 12% of veterans accounted for 24% of all outpatient pharmacy costs, with an average expenditure of $622 for veterans with diabetes compared with $276 for veterans without diabetes. There was $454 (73%) for non-diabetes-specific prescriptions and $168 (27%) for prescriptions related to glycemic control. Of pharmacy expenditures for glycemic control, $101 (60.1%) was attributed to insulin, oral agents, and supplies, while $67 (39.9%) was attributable to glucose monitoring. Veterans with diabetes were admitted 1.6 times as frequently as veterans without diabetes. CONCLUSIONS: This study demonstrates the feasibility of using a pharmacy-based electronic diabetes database in a payor system that can track both claims and individual classes of medication based on a unique identifier number. While the prevalence of diabetes in the VHA is high relative to other health care systems and the general population, patterns of medication usage, pharmacy costs, and relative admission frequency are comparable to results from the private sector
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=9540017&dopt=r

Year 1997

Druss B, Rosenheck R.
Evaluation of the HEDIS measure of behavioral health care quality. Health Plan Employer Data and Information Set.
Psychiatr Serv 1997; 48(1):71-75.

OBJECTIVE: The Health Plan Employer Data and Information Set (HEDIS) is the most widely used "report card" system comparing health care plans across different dimensions of performance. HEDIS uses only one measure of the quality of behavioral health care-the rate of follow-up after hospitalization for major affective disorder. This study used data from a national Veterans Affairs database to evaluate the generalizability of the HEDIS behavioral health quality measure. METHODS: Using administrative data from a nationwide sample of 114 VA hospitals, the HEDIS (version 2.5) quality measure was compared with several related performance measures including readmission rates and outpatient follow-up rates for other psychiatric disorders and for substance use disorders. The magnitude and statistical significance of Pearson's r value for correlation between measures was calculated. RESULTS: The HEDIS measure was moderately correlated with 30-day follow-up after hospitalization for other psychiatric disorders and with other performance measures of outpatient care. However, it was poorly correlated with follow-up for substance use disorders, inpatient measures including readmission rates, and several other measures of quality. CONCLUSIONS: Caution is needed in drawing conclusions about the quality of behavioral health plans based on the single measure used in HEDIS, version 2.5. Inclusion of other performance measures may be warranted
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=9117504&dopt=r

Year 1996

Booth BM, Blow FC, Ludke RL, Ross RL.
Utilization of acute inpatient services for alcohol detoxification.
J Ment Health Adm 1996; 23(4):366-374.

This study indicates that the majority of patients admitted to VA hospitals for medical detoxification could have those services provided on an outpatient or less intensive basis. However, inpatient medical detoxification services appear to be appropriate for those alcoholics at risk for potential life-threatening complications of withdrawal such as delirium tremens, or those with concurrent associated medical conditions such as pancreatitis, gastrointestinal bleeding, or complications of cirrhosis. Data were obtained from a national random sample of hospitalizations in Department of Veterans Affairs (VA) inpatient medical and surgical units. Medical records for 144 alcoholism-related medical admissions to 35 VA medical centers were reviewed using the Appropriateness Evaluation Protocol (AEP), a clinically based utilization review instrument widely used in the private sector. The medical records for the admission and each day of medical/surgical inpatient stay were reviewed using clinical criteria for the appropriateness of acute inpatient care as opposed to lower levels of care
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=8965052&dopt=r

Ehreth J.
The implications for information system design of how health care costs are determined.
Med Care 1996; 34(3 Suppl):MS69-MS82.

As the costs of health care assume increasing importance in national health policy, information systems will be required to supply better information about how costs are generated and how resources are distributed. Costs, as determined by accounting systems, often are inadequate for policy analysis because they represent resources consumed (expenditures) to produce given outputs but do not measure forgone alternative uses of the resources (opportunity costs). To accommodate cost studies at the program level and the system level, relational information systems must be developed that allow costs to be summed across individuals to determine an organization's costs, across providers to determine an individual patient's costs, and across both to determine system and population costs. Program level studies require that cost variables be grouped into variable costs that are tied to changes in volume of output and fixed costs that are allocated rationally. Data sources for program-level analyses are organizational financial statements, cost center accounting records, Medicare cost reports, American Hospital Association surveys, and the Department of Veterans Affairs (VA) cost distribution files. System-level studies are performed to predict future costs and to compare costs of alternative modes of treatment. System-level analyses aggregate all costs associated with individuals to produce population-based costs. Data sources for system-level analyses include insurance claims;n Medicare files; hospital billing records; and VA inpatient, outpatient, and management databases. Future cost studies will require the assessment of costs from all providers, regardless of organizational membership status, for all individuals in defined populations
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=8598689&dopt=r

Moos RH, Mertens JR.
Patterns of diagnoses, comorbidities, and treatment in late-middle-aged and older affective disorder patients: comparison of mental health and medical sectors.
J Am Geriatr Soc 1996; 44(6):682-688.

OBJECTIVE: To compare the diagnoses, psychiatric and medical comorbidities, and prior and current treatment received by late-middle-aged and older affective disorder patients in mental health and medical service settings and to identify predictors of these patients' length of inpatient care. DESIGN: Department of Veterans Affairs (VA) nationwide databases are used to examine the prevalence, diagnoses, and inpatient and outpatient treatment received by affective disorder patients in mental health and medical units in Fiscal Year 1990. RESULTS: Compared with late-middle-aged and older index medical patients (n = 11,701), index mental health patients (n = 9039) were more likely to have affective psychoses and major depressive disorder and less likely to have depressive disorder NOS. Almost 60% of affective disorder patients in mental health settings had comorbid psychiatric diagnoses; this was true of 30% of patients in medical settings. Moreover, more than 80% of affective disorder patients in mental health settings had concomitant medical disorders. Affective disorder patients also had very high rates of prior mental health and medical care. Patients who had more severe affective disorders and comorbid psychiatric and medical diagnoses had longer episodes of inpatient care; in contrast, more intensive prior medical and mental health outpatient care was associated with shorter episodes of inpatient care. CONCLUSIONS: The findings highlight affective disorder patients' high rates of comorbidity and intensive use of health care resources, emphasize the value of outpatient care in reducing the amount of subsequent inpatient care, and underscore the need for closer integration of mental health and medical care
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=8642160&dopt=r

Moos RH, King MJ, Patterson MA.
Outcomes of residential treatment of substance abuse in hospital- and community-based programs.
Psychiatr Serv 1996; 47(1):68-74.

OBJECTIVE: The study sought to determine whether inpatient readmission rates differed for patients with substance use disorders who were treated in either hospital-based or community-based transitional residential care. Length of residential care and intensity of outpatient mental health aftercare were examined as predictors of readmission. METHODS: Department of Veterans Affairs nationwide databases were used to document readmissions at one- and two-year intervals for male inpatients treated for substance use disorders who were discharged either to hospital-based (N = 2,190) or community-based (N = 4,490) residential care. Patients with and without concomitant psychiatric diagnoses were identified. RESULTS: Patients treated in community-based residential programs had lower one- and two-year readmission rates than patients who received hospital-based residential care. Longer episodes of residential care and more outpatient mental health care were also associated with lower readmission rates. Among patients with concomitant psychiatric disorders, those in hospital-based care benefited more from longer episodes of residential care and more intensive outpatient mental health aftercare. Residential care, longer episodes of care, and more outpatient mental health care were independent predictors of lower one- and two-year readmission rates after patient-based risk factors were controlled. CONCLUSIONS: The findings highlight the value of providing adequate amounts of residential and outpatient care for patients in substance abuse treatment, especially patients with concomitant psychiatric disorders
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=8925349&dopt=r

Piette JD, Moos RH.
The influence of distance on ambulatory care use, death, and readmission following a myocardial infarction.
Health Serv Res 1996; 31(5):573-591.

OBJECTIVE: To examine whether patients admitted for treatment of a myocardial infarction (MI) who live farther from their source of care are less likely to be followed in an outpatient clinic, and whether patients who receive follow-up care are less likely to die or to have a subsequent acute care admission. DATA SOURCE: Department of Veterans Affairs (VA) databases to identify a national sample of 4,637 MI patients discharged in 1992, their use of care, and vital status within the subsequent year. Sociodemographics, comorbid diagnoses, invasive cardiac procedures, hospital teaching status, and distance to patients' admitting hospital were determined. STUDY DESIGN: Using these longitudinal data, we examined the relationship between patient characteristics, distance to care, and use of outpatient care after discharge. We then examined the relationship between the use of ambulatory care and subsequent death and readmission. PRINCIPAL FINDINGS: Patients living more than 20 miles from their admitting hospital were less likely to use ambulatory services. Patients receiving ambulatory care were 79 percent as likely to die within the year as those without any follow-up care (95% C.I. = 0.66, 0.94). Patients living more than 20 miles from their admitting hospital were more likely to die independent of their likelihood of receiving VA outpatient follow-up. Among patients who did not die in the subsequent year, those receiving ambulatory care were 33 percent more likely to be readmitted to a VA hospital with a cardiac diagnosis (95% C.I. = 1.12, 1.57). CONCLUSIONS: Distance may pose a barrier to outpatient follow-up for some VA patients after a MI. It also may limit patients' ability to access medical care quickly in the event of a recurrent acute event. Ambulatory care after discharge may be an important factor determining survival for patients with cardiac disease
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=8943991&dopt=r

Ronis DL, Bates EW, Garfein AJ, Buit BK, Falcon SP, Liberzon I.
Longitudinal patterns of care for patients with posttraumatic stress disorder.
J Trauma Stress 1996; 9(4):763-781.

This study assessed patterns of mental health service use over time by patients with posttraumatic stress disorder (PTSD) - as compared with patients with schizophrenia and major depression - with emphasis on the persistence and episodic versus continuous nature of use. Data on utilization were extracted from Veterans Health Administration (VA)

administrative data bases. Temporal patterns of use were categorized into intervals of inpatient, outpatient, and no use. PTSD patients used substantial amounts of mental health services, but averaged 2.2 nonuse intervals lasting more than 100 days each, implying that use was episodic. Use of mental health services by patients with PTSD is substantial, persistent, and quite episodic. To the extent that use of services reflects the course of the disorder, the results suggest that remissions are usually followed by relapse, and that absence of symptoms does not mean that the disorder has run its course
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=8902745&dopt=r

Rubenstein LV, Yano EM, Fink A, Lanto AB, Simon B, Graham M et al.
Evaluation of the VA's Pilot Program in Institutional Reorganization toward Primary and Ambulatory Care: Part I, Changes in process and outcomes of care.
Acad Med 1996; 71(7):772-783.

PURPOSE: To evaluate the impact of the reorganization of an academic Veterans Affairs medical center toward primary and ambulatory care--including the implementation of a medical-center-wide interdisciplinary firm system and ambulatory care training program--on the quality of primary ambulatory care. METHOD: Randomly selected male veterans visiting the Veterans Affairs Medical Center in Sepulveda, California, were surveyed in 1992, early in the implementation of the program, and in 1993, after the program had been fully implemented. Two surveys were used: one before the veterans saw their primary care providers (practice-based survey) and the other immediately after patient visits (visit-based survey). Survey-participant data were then linked to computerized utilization and mortality data. Survey topics were mapped to the medical center's strategic plan and goals for ambulatory care, and focused on patients' reports about the care they had received in terms of continuity, access, preventive care, and other aspects of the biopsychosocial model of care. Administrative computer data were then used to evaluate effects on medical center workload. Statistical analyses included analysis of variance, analysis of covariance, chi-square, and logistic regression. RESULTS: For practice-based comparisons, complete data were available for 1,262 veterans in 1992 and 1,373 in 1993. For visit-based comparisons, complete data were available for 1,407 veterans in 1992 and 643 in 1993. Results included statistically significant improvements in continuity of care and detection of depression as well as increased rates of preventive care counseling (smoking and exercise). The proportion of veterans reporting being seen by physicians increased, as did the proportion of patients seen for check-ups rather than for acute problems. Fewer patients were seen in subspecialty clinics than in general medicine clinics. Patient satisfaction increased, hospitalizations decreased, and death rates decreased. Alcohol counseling and access to care for acute symptoms declined. Workload shifted from subspecialists to generalists and from inpatient care to outpatient care. CONCLUSION: The institutional reorganization toward primary and ambulatory care succeeded in substantially improving the quality of ambulatory care, reflecting improvements in the system of care and of health care provider training in ambulatory care
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=9158345&dopt=r

Smith ME, Sheldon G, Klein RE, Feild T, Feitz R, Stockford D et al.
Data and information requirements for determining veterans' access to health care.
Med Care 1996; 34(3 Suppl):MS45-MS54.

The Department of Veterans Affairs (VA) is responding to changing requirements for decision-support data by maximizing the value of data contained in VA and non-VA sources. The data are used to answer questions relating to the accessibility and utilization of VA and non-VA health services. Access studies require accurate estimates of the number of persons served and the number of persons who could be served. To derive these population estimates, VA employs census data to develop projections of the veteran population at the national, state, and county levels. Data from many surveys are used to supplement the census data. Access studies also require quantitative and qualitative data on the characteristics of VA and non-VA health care delivery systems at the national, state, and local levels. The Department of Veterans Affairs obtains health care system data from external sources, including the US Department of Health and Human Services, the American Medical Association, and the American Hospital Association, and from internal sources, including VA surveys and the VA administration inpatient and outpatient files. Utilization studies need more detailed patient-level information than access studies. Data elements pertaining to the reason for health care encounters and the services rendered are obtained from survey data, the VA inpatient and outpatient administration files, the national Medicare database, and state Medicaid databases. The Department of Veterans Affairs'decision-

support analyses for eligibility reform and health care system reform demonstrate the effectiveness of VA in analyzing data from many sources
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=8598687&dopt=r

Year 1995

Bannick RR, Ozcan YA.
Efficiency analysis of federally funded hospitals: comparison of DoD and VA hospitals using data envelopment analysis.
Health Serv Manage Res 1995; 8(2):73-85.

This article applies the technique known as Data Envelopment Analysis (DEA) to assess differences in performance efficiency among two branches of the federal hospital system, The Department of Defense (DoD) and The Department of Veterans' Affairs (VA). The analysis is based on two measures of performance output (inpatient days and outpatient visit, and six measures of resource input (capital investment in operational beds, service mix intensity, and supplies and three components of labor--providers, nurses and support). This study finds that based on these input and output measures, DoD hospitals are, on average, significantly more efficient than their VA counterparts. Within DoD, however, there are no significant differences in efficiency among the service components (US Air Force, Army or Navy), although Army hospitals appear more efficient in using service mix and provider labor
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10143981&dopt=r

Rosenheck R, Neale M, Leaf P, Milstein R, Frisman L.
Multisite experimental cost study of intensive psychiatric community care.
Schizophr Bull 1995; 21(1):129-140.

A 2-year experimental cost study of 10 Intensive Psychiatric Community Care (IPCC) programs was conducted at Department of Veterans Affairs (VA) medical centers in the Northeast. High hospital users were randomly assigned to either IPCC (n = 454) or standard VA care (n = 419) at four neuropsychiatric (NP) and six general medical and surgical (GMS) hospitals. National computerized data were used to track all VA health care service usage and costs for 2 years following program entry. At 9 of the 10 sites, IPCC treatment resulted in reduced inpatient service usage. Overall, for IPCC patients compared with control patients, average inpatient usage was 89 days (33%) less while average cost per patient (for IPCC inpatient, and outpatient services) was $15,556 (20%) less. Additionally, costs for IPCC patients compared with control patients were $33,295 (29%) less at NP sites but were $6,273 (15%) greater at GMS sites. At both NP and GMS sites, costs were lower for IPCC patients in two subgroups: veterans over age 45 and veterans with high levels of inpatient service use before program entry. No interaction was noted between the impact of IPCC on costs and other clinical or sociodemographic characteristics. Similarly, no linear relationship was observed between the intensity of IPCC services and the impact of IPCC on VA costs, although the two sites that did not fully implement the IPCC program had the poorest results. With these sites excluded, the total cost of care for IPCC patients at GMS sites was $579 (3%) more per year than that for the control patients
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Year 1994

Pankratz L, Jackson J.
Habitually wandering patients.
N Engl J Med 1994; 331(26):1752-1755.

BACKGROUND. Physicians are sometimes confronted with patients who gain admission to one hospital after another, sometimes referred to as "wandering patients." Little is known about the presenting symptoms of these patients, their use of hospital resources, or the costs of their medical care. We analyzed the demographic and clinical characteristics of wandering patients served by Department of Veterans Affairs medical centers (VAMCs). METHODS. For each patient they admit, all 159 hospitals in the Veterans Affairs medical system submit demographic and diagnostic

information to a central data base at the Data Processing Center in Austin, Texas. We searched these records to identify patients who were admitted to four or more VAMCs within each year from fiscal year 1988 through 1992. Patients so identified in any one year were called "wanderers"; those identified in all five years were designated "habitual wanderers." RESULTS. We identified 1013 wanderers in 1988. The number gradually declined each year to 729 in 1993. In 1991 there were 810 wandering patients, who averaged about eight admissions per year and over 100 days of inpatient care; they accounted for about $26.5 million in costs for inpatient and outpatient care in that year. Only 35 patients wandered in all five years from 1988 through 1992. The most common discharge diagnoses of these 35 men were related to substance abuse (mostly alcoholism) and mental disorders. Their 2268 admissions and 7832 outpatient visits cost an estimated $6.5 million over the five-year period. CONCLUSIONS. Patients who are repeatedly admitted to different hospitals--wandering patients--accumulate high numbers of admissions, cause diagnostic confusion, and receive uncoordinated care. Because of the complexity of their disorders, such patients require case management on a regional or national basis
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Perry HM, Jr., Gillespie KN, Romeis JC, Smith MM, Virgo KS, Carmody SE et al.
Effects of 'stroke-belt' residence, screening blood pressure and personal history risk factors on all-cause mortality among hypertensive veterans.
J Hypertens 1994; 12(3):315-321.

OBJECTIVES: To seek regional differences within the USA in the 'all-cause mortality' of hypertensive men during the 14 years following institution of antihypertensive treatment, and to determine how other pretreatment data can be related to that all-cause mortality. DESIGN: In the mid-1970s pretreatment clinical data were collected and computerized for 5698 hypertensive veterans. Deaths during the subsequent 14 years were obtained from the Veterans Administration Beneficiary Identification and Record Location System and the National Death Index. Relationships between pretreatment data and death were sought using chi 2- and z-tests for bivariate comparisons and logistic regression for multivariate analyses. PATIENTS: Half of the 5698 previously untreated male hypertensive military veterans were Black. Their mean age was 52.3 years and mean pretreatment blood pressure was 160/104 mmHg. Additional pretreatment data included body mass index, cigarette and alcohol usage, age and self-reported comorbidities. These patients began antihypertensive treatment during 1974-1975 in 28 special Veterans Administration outpatient clinics throughout the USA. RESULTS: During the 14 years after treatment began, 2283 of these patients (40%) died. Those from the southeastern USA, i.e. in the 'Stroke Belt', were 1.32-fold more likely to die than patients living elsewhere. Other pretreatment characteristics positively related to all-cause mortality included age, systolic blood pressure, cigarette and alcohol usage, and self-reported comorbidities. Race was unrelated to mortality. CONCLUSION: All-cause mortality was increased among hypertensive subjects from the southeastern USA. The reasons for this excess mortality remain unclear. Other pretreatment characteristics were also related to mortality, but race was not
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=8021486&dopt=r

Weaver FM, Burdi MD, Pinzur MS.
Outpatient foot care: correlation to amputation level.
Foot Ankle Int 1994; 15(9):498-501.

A retrospective analysis of Department of Veterans Affairs automated inpatient and outpatient records was performed for 3945 patients who underwent lower extremity amputation surgery due to peripheral vascular disease during fiscal year 1991. Demographic and clinical data were collected from reviewing patient database information for all Department of Veterans Affairs Hospitals nationwide. Patients were identified from the Physicians' Current Procedural Terminology codes for lower extremity amputations, and then divided into three groups (above the knee, below the knee, and foot and ankle) based on the most proximal level of amputation performed. Results indicate that increased use of designated foot care clinics was significantly associated with more distal level amputation surgery. Patients with above-the-knee amputations averaged 1.0 foot care clinic visit in the 2 years prior to amputation, whereas below-the-knee and foot and ankle amputees averaged 2.8 and 5.3 foot care clinic visits, respectively ($F[df = 2,3939] = 94.20$, $P < .05$). The same finding was noted when only users of foot care clinics were examined. Patients with a codiagnosis of diabetes were more likely to undergo distal amputation than those with other diagnoses ($P < .05$). The results of this

study suggest the potential effectiveness of designated foot care clinics in preserving limb length in individuals with peripheral vascular disease and diabetes
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Year 1993

Rosenheck R, Gallup P, Frisman LK.
Health care utilization and costs after entry into an outreach program for homeless mentally ill veterans.
Hosp Community Psychiatry 1993; 44(12):1166-1171.

OBJECTIVE: This study evaluated the impact of a Department of Veterans Affairs outreach and residential treatment program for homeless mentally ill veterans on utilization and cost of health care services provided by the VA. METHODS: Veterans at nine program sites (N = 1,748) were assessed with a standard intake instrument. Services provided by the outreach program were documented in quarterly clinical reports and in residential treatment discharge summaries. Data on nonprogram VA health service utilization and health care costs were obtained from national VA data bases. Changes in use of services and cost of services from the year before initial contact with the program to the year after were analyzed by t test. Multivariate analyses were used to examine the relationship of these changes to indicators of clinical need and to participation in the outreach program. RESULTS: Although utilization of inpatient service did not increase after veterans' initial contact with the program, use of domiciliary and outpatient services increased substantially. Total annual costs to the VA also increased by 35 percent, from $6,414 to $8,699 per veteran per year. Both clinical need and participation in the program were associated with increased use of health services and increased cost. Veterans with concomitant psychiatric and substance abuse problems used fewer health care services than others. CONCLUSIONS: Specialized programs to improve the access of homeless mentally ill persons to health care services appear to be effective, but costly. Dually diagnosed persons seem especially difficult to engage in treatment
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=8132189&dopt=r

Year 1990

Goldman MP.
Ciprofloxacin drug utilization review and prospective drug use evaluation.
DICP 1990; 24(1):82-86.

Ciprofloxacin is a fluoroquinolone antimicrobial with activity against both gram-negative and -positive bacteria including pseudomonal and staphylococcal species. It is the only available oral agent possessing this unique spectrum of activity that achieves serum concentrations adequate to treat a variety of systemic infections. A retrospective drug utilization review and a prospective drug use evaluation of ciprofloxacin were performed to determine if the agent was being used for appropriate indications, to ensure correct dosing and appropriate monitoring, and to determine whether its use is cost effective at the Veterans Administration Medical Center, Cleveland (VAMCC). For the retrospective review, 40 patients' charts were randomly chosen for review from computerized inpatient and outpatient prescription records. Drug use review criteria were developed by the Pharmacy Service and Infectious Disease Section. For the prospective evaluation, data were collected for all inpatient and outpatient requests for ciprofloxacin during a six-month period (May to November 1988) using the same criteria as in the retrospective study. Cost analysis was performed by identification and cost comparison of alternative therapy and by estimating the number of days saved by using appropriate oral therapy. All charts from the retrospective review were found to meet criteria for appropriate use. All patients for whom documented follow-up was performed had microbiologic or clinical cures. In the prospective evaluation, 168 patients were started on ciprofloxacin. Ninety-five percent of patients had appropriate justification for use according to criteria. Drug cost savings for the six-month period was +14,962.54 or +29,925.08/year. This covered drug and minibag acquisition costs only. An estimated 127 hospital days were saved (shortened length of +71,717.00 or +143,434.00/year.(ABSTRACT TRUNCATED AT 250 WORDS)
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